

123C 16/30

009773728/7
DIALOG(R) File 351:DERWENT WPI
(c) 1994 Derwent Info Ltd. All rts. reserv.

009773728 WPI Acc No: 94-053579/07

XRAM Acc No: C94-024076

XRPX Acc No: N94-042483

Surface coated tungsten carbide-base cemented carbide cutting tool w
excellent resistance to chipping - has carbide base cemented carbide
matrix and hard coating layer with granular crystal structure on
surface of matrix

Patent Assignee: (MITV) MITSUBISHI MATERIALS CORP

Number of Patents: 001

Number of Countries: 001

Patent Family:

CC Number	Kind	Date	Week
JP 6008008	A	940118	9407 (Basic)

Abstract (Basic): JP 06008008 A

The carbide cutting tool comprises a W-carbide-base cemented carbide matrix, and 0.5-20 micron mean thickness hard coating layer having granular crystal structure formed on the surface of the matrix in which the hard coating layer is constituted with an under layer comprising a single layer of one of carbide, nitride, carbonitride, carboxide, and oxycarbonitride of Ti, or multilayer of more than one the Ti-cpd., and a top layer comprising a single layer of one of the Ti-cpd., and Al-oxide, or double layer of more than one of the Ti-cpd. and Al-oxide, and at least one layer in the top layer is constituted with Ti-carbonitride having crystal structure of either one of those changing from granular crystal structure to longitudinally grown crystal one, or further, changing to granular crystal one, or changing from longitudinally grown crystal one to granular crystal one.

USE - For continuous or intermittent cutting steel or iron castings, exhibiting wear resistance. Dwg.0/0

Derwent Class: L02; M13; P54; P56;

Int Pat Class: B23B-027/14; B23P-015/28; C23C-016/30; C23C-028/04

████████ (C) PAJ / JPO

PN - JP6008008 - 940118

AP - JP920191603 920625

PA - MITSUBISHI MATERIALS CORP

IN - YOSHIMURA HIRONORI; others: 01

I - ---B23B27/14---; B23P15/28; ---C23C16/30---; C23C28/04

TI - CUTTING TOOL MADE OF SURFACE COATING TUNGSTEN CARBIDE GROUP SUPPER HARD ALLOY EXCELLENT IN CHIPPING RESISTANCE PROPERTY

AB - PURPOSE: To improve a chipping resistance property by making crystal structure of a carbide nitride titanium layer as crystal structure changing from granular crystal structure to longitudinal growth crystal structure.

- CONSTITUTION: Hard coated layers respectively having granular crystal structure are formed in average layer thickness of 0.5-20μm on the surface of a WC group super hard alloy substrate. These hard coated layers are constituted of a lower part layer consisting of a angle layer of one kind of Ti compounds of TiC, TiN, TiCN, TiCO and TiCNO or a multiple layer of more than one kind of them and an upper layer consisting of a single layer of one kind of the above Ti compounds an ---Al2O3--- or a multiple layer of more than one kind of them. Additionally, at least one layer of the upper layers is constituted of TiCN, and crystal structure of at least one layer of this TiCN layer is used as crystal layer changing from granular crystal structure to longitudinal growth structure.

GR - M1590

ABV - 018203

ABD - 940411

XPN - J06008008